UNIVERSITY OF ILLINOIS

THE GRADUATE SCHOOL

FINAL EXAMINATION

OF

PAO JIN HO

FOR THE

Degree of Doctor of Philosophy

Thursday, July 31, 1924, 3 p. m.
Room 354, Administration Building

Committee in Charge:

Professor J. W. Garner, Chairman
Professor J. A. Fairlie
Professor R. M. Story
Doctor C. A. Berdahl
Professor M. H. Robinson

Outline of Studies

Major Subject: Political Science (International Law)
First Minor Subject: Political Theory
Second Minor Subject: Economics

Thesis: PACIFIC BLOCKADE WITH SPECIAL REFERENCE TO ITS USE AS A MEASURE OF REPRISAL

Summary

1. Pacific blockade is a measure resorted to for the avoidance of war and therefore it has occupied an important place in international law.

2. Pacific blockade is a legitimate act of international coercion.

3. Every state has a right to resort to pacific blockade as a measure of reprisal. Both pacific blockade and reprisal are positive remedies for obtaining redress.

4. When the establishment of pacific blockade is caused by a refusal to comply with pecuniary demands, the offended state may seize the ships of the blockaded state in order to enforce payment of the money demanded.

5. Vessels may be detained as a guarantee for the payment of compensation or reparation after the blockade is raised.

6. To condemn pacific blockade because it may lead to war seems unjust. It must be determined whether the existing situation or the pacific blockade itself provokes the war.

7. Theory, practice, and modern juristic opinion are in accord in recognizing pacific blockade as having become a legitimate weapon of coercion.

EDUCATIONAL CAREER

A.B., Fuh-tan University, 1920.

A.B., University of Washington, 1921.

A.M., University of Illinois, 1922.

UNIVERSITY OF ILLINOIS

THE GRADUATE SCHOOL

FINAL EXAMINATION

OF

ELIZABETH CHARLOTTE HYDE

FOR THE

Degree of Doctor of Philosophy

Friday, December 19, 1924, 1:30 p. m.
Room 162, Chemistry Building

COMMITTEE IN CHARGE:

PROFESSOR W. C. ROSE, Chairman
PROFESSOR W. A. NOYES
PROFESSOR B. S. HOPKINS
PROFESSOR G. D. BEAL
PROFESSOR C. S. MARVEL
PROFESSOR W. E. BURGE

Outline of Studies

Major Subject: Chemistry (Physiological)

First Minor Subject: Organic Chemistry

Second Minor Subject: Physiology

Thesis: STUDIES IN CREATINE METABOLISM

Summary

Studies have been made of the relation of high protein ingestion to creatinuria, the fate of ingested creatine and the transformation of creatine to creatinine in muscle tissue. The following conclusions may be stated:

Creatinuria may be induced in normal men and women by the ingestion of high protein diets. No quantitative relationship between creatine excretion and the arginine of the diet was demonstrated.

The metabolism of creatine takes place through two or more different paths in men and women, one of which yields creatinine. The ability of the male organism to utilize creatine exceeds that of the female, the latter exhibiting a periodicity which may be partly accounted for by a variability in creatinine formation.

Creatine is transformed to creatinine in boiled and unboiled incubated muscle extracts. During the process of determination, creatinine continues to form from the creatine present, due to the alkalinity of the reaction.

EDUCATIONAL CAREER

Franklin Academy, Malone, New York, 1901-1905.

A.B., Mt. Holyoke College, 1909.

Science Teacher, Bay Shore High School, Bay Shore, Long Island, 1909-1912.

Cornell University Summer School, Ithaca, New York, 1911.

Science Teacher, The Ossining School for Girls, Ossining, New York, 1916-1917, 1919-1920.

Science Teacher, Trenton High School, Trenton, New Jersey, 1917-1919.

Assistant in Chemistry, University of Illinois, 1920-1924.

M.S., University of Illinois, 1922.

Hull Laboratory, University of Chicago Summer Session, 1923.

PUBLICATION

Lipase Studies, Journ. Biol. Chem., 1923, LVI, 7. (With H. B. Lewis.)

UNIVERSITY OF ILLINOIS

THE GRADUATE SCHOOL

FINAL EXAMINATION

OF

JOHN WILLIAM KERN

FOR THE

Degree of Doctor of Philosophy

Tuesday, August 5, 1924, 2 p. m.
Room 162 Chemistry Building

Committee in Charge:

Professor C. S. Marvel, Chairman
Professor W. C. Rose
Professor B. S. Hopkins
Professor W. H. Rodebush
Professor G. D. Beal
Professor F. W. Tanner

Outline of Studies

Major Subject: Chemistry (Organic)

First Minor Subject: Physiological Chemistry

Second Minor Subject: Bacteriology

Thesis: THE CATALYTIC REDUCTION OF OLEFINES

Summary

1. Sixteen derivatives of ethylene have been reduced with varying amounts of catalyst and accurate quantitative data obtained for the rate of reduction of each compound, with small amounts of catalyst.

2. By comparison with the results obtained by other workers, this catalyst has been shown to be much more efficient than that prepared by other methods.

3. The results obtained by shaking the fatigued catalyst with oxygen have indicated that for unsaturated hydrocarbons, unsaturated acids and their esters, activation with oxygen has little if any effect. For unsaturated ketones the activity of the catalyst is increased to some extent.

4. The effect of adding .0001 mole of ferrous sulfate has been tested with most of the compounds studied. If the substance to be reduced is pure, the presence of ferrous salts has a decidedly retarding effect upon the rate of reduction. If a trace of aldehyde is present, then ferrous salts produce a marked acceleration of the rate of reduction.

5. Contrary to statements made in the literature, it has been shown in this work that small amounts of impurities which act as poisons to the catalyst produce a very marked decrease in the speed of reduction of the carbon carbon double bond when working with small amounts of catalyst.

6. A study has been made of the mechanism of the reaction for the catalytic reduction of olefines as compared with that when other reducing agents are used. The mechanism has been shown to be entirely different in the two cases and a theory has been developed to explain the mechanism of the reaction.

EDUCATIONAL CAREER

A.B., Colgate University, 1904.

A.M., Syracuse University, 1910.

Athletic Coach and Instructor in Physics and Chemistry, Friends' School, Wilmington, Del., 1904-05.

Instructor in Science, Urbana, Ohio, High School, 1905-07.

Athletic Director and Instructor in Chemistry, Biology, and Mathematics, Mansfield State Normal School, Mansfield, Pa., 1907-09.

Head of Department of Chemistry, Elmira Free Academy, Elmira, N. Y., 1910-18; Mercer University, Macon, Ga., 1918-22.

PUBLICATION

The Solubilities of the Chloroplatinate, Bromo-Platinate and Chloriridate of Ammonium and the Separation of Platinum and Iridium. (With E. H. Archibald.) Trans. Roy. Soc. Can., Series III, Vol. XI, pages 7-16.

UNIVERSITY OF ILLINOIS

THE GRADUATE SCHOOL

FINAL EXAMINATION

OF

EDWARD OSCAR NORTH

FOR THE

Degree of Doctor of Philosophy

Wednesday, August 6, 1924, 2 p. m.
Room 162, Chemistry Building

Committee in Charge:

Professor G. D. Beal, Chairman
Professor B. S. Hopkins
Professor C. S. Marvel
Professor W. H. Rodebush
Professor F. W. Tanner

Outline of Studies

Major Subject: Chemistry (Analytical)
First Minor Subject: Inorganic Chemistry
Second Minor Subject: Bacteriology

Thesis: THE PREPARATION PROPERTIES AND USES OF SILICODUODECITUNGSTIC ACID

Summary

(1) A new method for the preparation of silicoduodecitungstic acid has been described.

(2) Some of the properties of silicoduodecitungstic acid have been studied.

(3) A new volumetric method for the determination of alkaloids has been described. This method has been applied to assays of cinchona bark, belladonna leaves, stramonium leaves, hydrastis, and tobacco extracts.

(4) A new indicator for silicoduodecitungstic acid has been described.

EDUCATIONAL CAREER

B.S., Beloit College, 1918.

M.S., University of Illinois, February 1922.

Assistant and Instructor in Chemistry, Beloit College, 1918-1920.

Assistant in Chemistry, University of Illinois, 1920-1924.

UNIVERSITY OF ILLINOIS

THE GRADUATE SCHOOL

FINAL EXAMINATION

OF

CHARLES WILLIAM RODEWALD

FOR THE

Degree of Doctor of Philosophy

Thursday, August 7, 1924, 2 p. m.
Room 162, Chemistry Building

COMMITTEE IN CHARGE:

PROFESSOR C. S. MARVEL, Chairman
PROFESSOR W. H. RODEBUSH
PROFESSOR G. D. BEAL
PROFESSOR J. H. REEDY
PROFESSOR E. J. TOWNSEND

Outline of Studies

Major Subject: Chemistry (Organic)
First Minor Subject: Physical Chemistry
Second Minor Subject: Mathematics

Thesis: I. DIKETO-PYRROLIDINE DERIVATIVES CONTAINING ARSENIC. II. ARSONO-ARYLAMINO ALCOHOLS

Summary

I.

1. The synthesis of compounds containing the arsonic acid group and a nitrogen atom in a heterocyclic ring was undertaken with the object of preparing compounds possessing trypanocidal properties.

2. Various 1-(4'-arsono-phenyl)-2-aryl-4, 5-diketo-pyrrolidines were prepared by condensing p-arsanilic acid, pyruvic acid, and aromatic aldehydes.

3. Similar condensations were carried out with p-arsanilic acid, pyruvic acid, and cinnamic aldehyde, and with p-arsanilic acid, phenyl pyruvic acid, and benzaldehyde.

II.

1. On account of the frequent occurrence of amino alcohol groups in physiologically active compounds, aryl arsonic acids containing such groups have been prepared in a search for trypanocidal compounds of practical importance.

2. ω-chloroalkyl esters of chloroformic acid were condensed with amino aryl arsonic acids to form corresponding ω-chloroalkyl-(arsono-aryl)-carbamates. The latter, on treatment with two moles of alkili, formed heterocyclic rings containing oxygen and nitrogen atoms, and on treatment with excess of alkali formed arsono-arylamino alcohols.

3. o-Chloro-cyclohexyl chloroformate was condensed with p-arsanilic acid. A similar series of reactions was carried out with the resulting carbamate.

EDUCATIONAL CAREER

B.S., University of Illinois, 1920.
M.S., University of Illinois, 1921.
Graduate Assistant in Chemistry, 1920-21.
Social Hygiene Board Fellow, 1921-23.
Instructor in Chemistry, University of Nebraska, 1923-24.

PUBLICATION

Arsono-arylamino Alcohols. Jour. Am. Chem. Soc., *45,* 3102, (1923). (With Roger Adams.)

UNIVERSITY OF ILLINOIS

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Professor B. S. Hopkins
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Professor W. E. Burge

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M.S., University of Illinois, 1922.

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